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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,208	02/12/2002	Charles E. Taylor	SHPR-01041USO SRM	4381
29190	7590	01/13/2006	EXAMINER	
BELL, BOYD & LLOYD LLC P.O. BOX 1135 CHICAGO, IL 60690-1135			TRAN, THAO T	
			ART UNIT	PAPER NUMBER
			1711	
DATE MAILED: 01/13/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/074,208	<b>Applicant(s)</b> TAYLOR, CHARLES E.	
	<b>Examiner</b> Thao T. Tran	<b>Art Unit</b> 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/24/2005 has been entered.
2. Claims 1-52 are currently pending in this application. Claim 9 has been amended.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 9-16, 19, 22, 25, 27, 30, 33, 36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 9 contains the newly added limitation, "said trailing edge being finished in the same material as the blade itself", has no proper support in the specification as originally presented.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 9-16, 19, 22, 25, 27, 30, 33, 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites the limitation "the blade" in line 9. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US Pat. 4,789,801).

Lee teaches an ion generator and an air conditioner (loud speaker), comprising a first array of electrodes; a second array of electrodes downstream from the first array; and a voltage generator coupled to the electrodes to create an airflow from the first to the second electrodes; each electrode is of one-piece construction; the first electrodes being ion emitters and pin-shaped, whereas the second electrodes ion collectors (see Figs. 2-3; col. 5, ln. 37-65; col. 6, ln. 26-42).

The second electrodes in Lee's invention are solid in structure, having a leading nose and a two side walls (see Fig. 3), not with the ends bent back to meet each other to make hollow electrodes. However, it would have been obvious to one of ordinary skill in the art, at the time

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the invention was made, that specific configurations of the electrodes would have been an obvious matter of design choice. Since the second electrodes in Lee's invention are also collector electrodes, they would work equally well because the collector electrodes collect ion particles on the surface. Moreover, specific configurations of the electrodes would have been determined by routine experimentation in order to achieve maximal benefits attendant therewith. See MPEP 2144.04, section IVB.

In regards to claims 21-23, 26-37, 48-50, it has been settled within the skill in the art that the manner of operation, intended use, or how the product is made, would have insignificant patentable weight when an apparatus claim is being considered. See MPEP 2114.

9. Claims 1-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakakibara et al. (US Pat. 4,643,745).

Sakakibara teaches an air cleaner, which includes an ion generator, comprising a first array of electrodes; a second array of electrodes downstream of the first array; a voltage generator coupled to the electrodes to create an airflow from the first to the second electrodes; each electrode is of one-piece construction; the first electrodes being ion emitters and pin-shaped, whereas the second electrodes ion collectors (see Figs. 1-4, 10; col. 2, ln. 57-67; col. 3, ln. 46-67).

Sakakibara's second electrodes are solid in structure, having a leading nose and a two side walls (see Figs. 2, 6, 9), not with the ends bent back to meet each other to form hollow electrodes. However, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, that specific configurations of the electrodes would have been an obvious matter of design choice. Since the second electrodes in Lee's invention are also collector

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electrodes, they would work equally well because the collector electrodes collect ion particles on the surface. Moreover, specific configurations of the electrodes would have been determined by routine experimentation in order to achieve maximal benefits attendant therewith. See MPEP 2144.04, section IVB.

In regards to claims 21-23, 26-37, 48-50, it has been settled within the skill in the art that the manner of operation, intended use, or how the product is made, would have insignificant patentable weight when an apparatus claim is being considered. See MPEP 2114.

### *Response to Arguments*

10. Applicant's arguments filed on 10/24/2005 have been fully considered but they are not persuasive.

Regarding the reference of Lee '801, Applicants point out that the sharp edges of the prior art have the disadvantage of generating ion emission, creating unwanted corona that increases losses in air flow and ozone; and that the presently claimed invention remedies this problem by bending the edges of the electrode to increase the apparent radius of the edges. This argument appears to be directed to the ion-emitting electrodes, and not the particle-collecting electrodes whose shape is recited in the present invention.

The same arguments are presented in reference to the prior art of Sakakibara '745.

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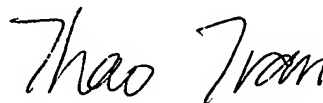
***Contact Information***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 571-272-1080. The examiner can normally be reached on Monday-Friday, from 9:00 a.m. - 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tt  
January 9, 2006



**THAO T. TRAN  
PATENT EXAMINER**